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<p>(21) International Application Number: PCT/NL99/00737</p> <p>(22) International Filing Date: 2 December 1999 (02.12.99)</p> <p>(30) Priority Data: 98204018.0 2 December 1998 (02.12.98) EP 99200739.3 12 March 1999 (12.03.99) EP</p> <p>(71) Applicant (for all designated States except US): CENTRUM VOOR PLANTENVEREDELINGS- EN REPRODUK- TIEONDERZOEK (CPRO-DLO) [NL/NL]; Droeve- ndaalsesteeg 1, NL-6708 PB Wageningen (NL).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): AHARONI, Asaph [IL/IL]; Pinkas 52 Street, Tel-Aviv (IL). LÜCKER, Joost [NL/NL]; Hollasstraat 26, 5991 DA Baarlo (NL). VERHOEVEN, Harrie, Adrianus [NL/NL]; Orionlaan 45, NL-5694 LB Breugel (NL). VAN TUNEN, Arjen, Johannes [NL/NL]; Wim Sonneveldstraat 31, NL-6708 NA Wageningen (NL). O'CONNELL, Ann, Patricia [IE/NL]; Boswinde 29, NL-2633 JH Nootdorp (NL).</p>		<p>(74) Agent: DE HOOP, Eric; Octrooibureau Vriesendorp & Gaade, P.O. Box 266, NL-2501 AW The Hague (NL).</p> <p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</p>
<p>(54) Title: FRUIT FLAVOUR RELATED GENES AND USE THEREOF</p> <p>(57) Abstract</p> <p>DNA sequences encoding enzymes involved in the biosynthetic pathway for aliphatic and/or aromatic ester production in fruit are disclosed. The enzymes have alcohol acyl transferase, alcohol dehydrogenase, pyruvate decarboxylase, thiolase, aminotransferase and esterase activities, respectively. The polypeptides having said activities are disclosed. Expression vectors comprising the DNA sequences may be used for regulating ester formation in fruit. Genetically modified plants and microorganisms may be used for producing esters.</p> <pre> graph TD A[Fatty acids, Amino acids] -- "amino-transferase, thiolase" --> B[Short chain fatty acids, α keto acids] A -- "thiolase" --> B B -- "pyruvate decarboxylase" --> C[Aldehydes] C -- "alcohol dehydrogenase" --> D[Alcohols] D -- "alcohol acyl transferase" --> E[Esters] B -- "thiolase + Coa" --> F[Acyl - coA's] F -- "alcohol acyl transferase" --> E F -- "esterase" --> E </pre>		

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